

## ARNOLD POMPOS

Fermi National Accelerator Laboratory

MS 318

Batavia, IL 60510

Tel: (630) 840-8410 (w), (630) 840-4241 (h)

e-mail: pompos@fnal.gov

Web page: [http://home.fnal.gov/~pompos/job\\_search/index.html](http://home.fnal.gov/~pompos/job_search/index.html)

## EDUCATION

PURDUE UNIVERSITY, Department of Physics, West Lafayette, IN (12/2002)

Ph.D. GPA 3.8/4.0.

Thesis: Search for the Supersymmetric Partner of the Top Quark in Dilepton Events Produced in Proton-Antiproton Collisions at center of mass 1.8 TeV

CHARLES UNIVERSITY, Department of Theoretical Physics, Prague, Czech Republic (06/1994)

Master of Science, Summa Cum Laude, GPA 4.0/4.0.

Thesis: Gravity in Non-commutative Geometry.

## AWARDS

- George W. Tauffest Memorial Award for outstanding promise in high-energy physics research (2002).
- Phi Beta Delta as a recognition of achievements in international education and exchange (2001).
- Purdue University Research Foundation Fellowship (1998-1999).
- Purdue University Summer Research Scholarship (1996).
- Charles University Scholarship for the highest GPA (1990-1994).

## RESEARCH EXPERIENCE

PURDUE UNIVERSITY, Department of Physics, West Lafayette, IN (01/2003 - present)

POST-DOCTORAL RESEARCH ASSOCIATE working at Fermi National Accelerator Laboratory (Fermilab), CDF experiment.

Advisor: Virgil Barnes

Currently working on search for supersymmetry with CDF collected data at center of mass energy 2.0 TeV of proton antiproton collisions.

Mentoring graduate student on thesis research.

PURDUE UNIVERSITY, Department of Physics, West Lafayette, IN (01/1997 - 12/2002)

RESEARCH ASSISTANT stationed at Fermilab.

Advisor: Virgil Barnes, Daniela Bortoletto, Purdue University, Stephan Lammel, Fermilab

- Searched for new physics phenomena, supersymmetry, in the proton antiproton collision data produced at center of mass energy 1.8 TeV and collected by the CDF experiment. Specialized in the two-lepton, jets and transverse energy imbalance signature search for the supersymmetric partner of the top quark (stop quark) and the supersymmetric partner of neutrino (sneutrino).
- Set a world leading limit on the sneutrino mass and increased the stop quark search sensitivity by a factor of two in comparison to other worldwide stop searches.
- Measured and made a substantial progress in understanding the rate of lepton misidentification in events produced by proton antiproton collisions.

- Helped to build, test and calibrate with a radioactive source the new, CDF Run II endplug calorimeter.
- Helped to test and calibrate the hadronic and electromagnetic calorimeters of the Compact Muon Solenoid experiment of the Large Hadron Collider located at CERN, Geneva, Switzerland.

CHARLES UNIVERSITY, Department of Theoretical Physics, Prague, Czech Republic (09/1989 - 06/1994)

Advisor: Ctirad Klimčík

Explored the non-commutative generalization of differential geometry. Applied the obtained results to a scalar field coupled to gravity. Obtained in both four and higher dimensional space-times, black-hole solutions of Einstein's field equations for the scalar field coupled to gravity.

## TEACHING EXPERIENCE

PURDUE UNIVERSITY, Department of Physics, West Lafayette, IN

TEACHING ASSISTANT. (01/1996 - 06/1996)

Calculus-based Electricity and Magnetism course.

- Taught problem solving skills and prepared students for their exams, wrote quizzes.
- Graded homework and quizzes.
- Was responsible for three sections of recitations. (Total of 80 students). Kept the performance of students of these three sections among the top four out of 21.
- Was rated by students as the best teaching assistant.
- Addressed individual students' questions and needs in the departmental physics and math help center.

TEACHING ASSISTANT (08/1995 - 05/1996)

Senior level Quantum Mechanics and graduate level Statistical Mechanics courses.

- Assisted students individually with homework problems or material they found difficult to understand.
- Was responsible for grading homework, quizzes and tests.

## PROFESSIONAL EXPERIENCE

FERMILAB, Office of Public Affairs, Batavia, IL, (09/1998 - 09/1999)

HIGH-ENERGY PHYSICS AND WEB CONSULTANT.

- Served as a physics consultant for Fermilab's biweekly magazine, FermiNews.
- Wrote highly popular FermiNews article about relativistic effects ("Santa at Nearly the Speed of Light", FermiNews, Volume 21, pg. 6-7, 1998, <http://www.fnal.gov/pub/ferminews/FermiNews98-12-11.pdf>).
- Worked as a Web consultant for the Fermilab's Office of Public Affairs.
- Developed and maintained Fermilab's central web pages. Revitalized essential pages and links.
- Initiated, designed, wrote, illustrated and maintained a popular system of web pages about light, <http://home.fnal.gov/~pompos/light> or <http://www.fnal.gov/pub/inquiring/more/light>

## PRESENTATIONS

"Search for the Scalar Top at CDF", New Perspectives, Students conference, Fermilab, IL. June 1999

"Search for the Stop Quark at CDF ", American Physical Society meeting, Atlanta, GA. March 1999

"Search for the Stop Quark in Dileptons", SUSY and Higgs Workshop, Fermilab, IL. August 1998

"Search for the Supersymmetric Partner of the Top Quark at CDF", American Physical Society meeting, Washington, D.C. April 1997

"Gravity in Non-Commutative Geometry" Colloquium, Department of Theoretical Physics, Charles University, Prague, Czech Republic. March 1994

## PUBLICATIONS

"Search for the Supersymmetric Partner of the Top Quark in Dilepton Events from p-pbar Collisions at 1.8 TeV", submitted for publication to Phys. Rev. Letters.

"Grading of Spinor Bundles and Gravitating Matter in Noncommutative Geometry", C. Klimcik, A. Pompos and V. Soucek, Letters in Mathematical Physics, 30, 259, 1994

"Black Holes with Non-commutative Hair", C. Klimcik, P. Kolnik and A. Pompos, Charles University Preprint, PRA-HEP-93/9, 1993.

"Non-commutative black holes in D dimensions", C. Klimcik, P. Kolnik and A. Pompos, Charles University Preprint, PRA-HEP-94/5, 1994.

## COMPUTER SKILLS

Language: C++, C, Perl, FORTRAN

Platforms: UNIX, Linux

Web: HTML, CGI

## COMMUNICATION SKILLS

- Volunteered on numerous occasions for the Fermilab's education department. (01/1997- present)
- Was elected as a 1997-1998 representative of the Graduate Student Association at Fermilab.
- Was selected to be part of Fermilab's 1998 delegation to meet and discuss high-energy and Fermilab related issues with congressional staff and policymakers in Washington D.C.
- Organized tours and guided Fermilab visitors per request of the Office of Public Affairs.
- Gave popular presentations and lectures about high-energy physics to Fermilab visitors, to public audience in Slovak Republic and to numerous high-school classes in Slovakia and Czech Republic.
- Helped several TV crews from Croatia, Poland and Czech Republic to prepare documentary about Fermilab and high-energy physics.
- Was a high-energy physics consultant for the Czech TV and appeared in their particle physics documentary.

CITIZENSHIP: Slovak Republic

LANGUAGES: Fluent in English, Hungarian, Slovak, Czech and Russian

ACTIVITIES: Member of American Physical Society, 1997-present. Interests include playing soccer and volleyball, skiing, hiking, traveling and dancing.

## REFERENCES

Prof. Virgil Barnes  
Department of Physics  
Purdue University  
West Lafayette, IN, 47907  
Tel. (765) 494 5199  
barnes@physics.purdue.edu

Prof. Daniela Bortoletto  
Department of Physics  
Purdue University  
West Lafayette, IN, 47907  
Tel. (765) 494 5197  
daniela@physics.purdue.edu

Dr. Stephan Lammel  
Fermi National Accelerator Laboratory  
MS 318  
Batavia, IL, 60510-0500  
Tel. (630) 840 8408  
lammel@fnal.gov